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BICS-024

B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

00546

June, 2016

BICS-024 : DIGITAL IMAGE PROCESSING

Time : 3 hours *Maximum Marks : 70*

Note : *Answer any **seven** questions. All questions carry equal marks.*

1. (a) Explain the components of an image processing system. *5*

(b) What are the basic concepts in sampling and quantization ? *5*

2. Explain the elements of visual perception. *10*

3. Explain the correspondence between filtering in spatial and frequency domain. *10*

4. What do you mean by Colour Space ? Classify it and describe CMY Colour Model. *10*

5. (a) Explain any four basic relationships between pixels. *5*

(b) What are the different transforms used in DIP ? Explain the most advantageous one in detail. *5*

6. (a) Describe how homomorphic filtering is used to separate illumination and reflectance component. 5

(b) How many filters are used for image enhancement ? 5

7. How do you perform edge detection ? Give suitable algorithm and discuss how the edge points are linked. 10

8. Explain plane to plane transformation. 10

9. Explain colour slicing and colour complements. 10

10. Write short notes on any ***two*** of the following : 2×5=10

(a) Spatial Filtering

(b) Basic Global Thresholding

(c) Chain Codes